

**Final Performance Report
NAG5-7701**

Date: January 22, 2002

PI: Dr. Stefi Baum, Space Telescope Science Institute

NASA Grant No: NAG5-7701

Title: *ROSAT Observations of a Complete Nearby Sample of Low Luminosity Radio Galaxies*

STScI Project No: J0145

Performance Pd: 10/01/98-09/30/01

**STScI Grant
Administrator:** Joy Hayes McQuay
Space Telescope Science Institute
Sponsored Programs
3700 San Martin Drive
Baltimore, MD 21218
Phone: 410.338.4586
Fax: 410.338.4525
Email: mcquay@stsci.edu

We are studying the X-ray emission in a sample of nearby radio galaxies. The X-rays probe several important components - (1) the AGN, (2) the ISM of the host galaxy, and (3) the intergalactic or intracluster medium through which the jets propagate. The interaction of the radio plasma with the hot ambient gas will allow us to constrain the properties of the environments and the energetics of the radio source propagation.

We have made excellent progress reducing the ROSAT new and archival data on our complete sample of nearby radio galaxies. The data reduction has taken longer than originally anticipated because we have identified bubbles of x-ray emission around many of the central galaxies and we have been exploring many different methodologies for assuring the results are robust before we publish and complete our interpretation. We have now begun the final phases of the work, with a draft paper under construction and a planned for submission date of early 2001. This work comprises 1/3 of the thesis work of a graduate student and will be the final phase in the completion of the thesis.

Publication of Results:

Results will be published by Verdoes-Kleijn et al. and will be submitted later this year.